CLASSIFICATION SECRET ~~SECRET~~

CENTRAL INTELLIGENCE AGENCY
INFORMATION FROM
FOREIGN DOCUMENTS OR RADIO BROADCASTS

REPORT

CD NO.

50X1-HUM

COUNTRY USSR

SUBJECT Economic; Technicological - Machine tools

HOW PUBLISHED Monthly periodicals; daily newspapers

WHERE PUBLISHED USSR

DATE PUBLISHED Aug, Sep 1949

LANGUAGE Russian

DATE OF INFORMATION 1949

DATE DIST. 23 Nov 1949

NO. OF PAGES 2

SUPPLEMENT TO REPORT NO.

THIS IS UNEVALUATED INFORMATION

SOURCE Periodicals and newspapers as indicated.

DISCUSSES DEVELOPMENTS IN MACHINE-TOOL INDUSTRY

PRODUCE NEW MODEL -- Stanki i instrument, No 9, Sep 49

In conformance with an order of the Ministry of Machine-Tool Building USSR concerning modernization of metal-cutting machine tools, Soviet machine-tool builders have modernized the Model 1336M turret lathe and produced a new high-speed lathe, Model 1A336.

In chucking work, the new machine can reach a maximum cutting speed of over 700 meters per minute and in bar work, 225 meters per minute.

The principal difficulty was selecting roller friction bearings for the spindle. No 7514 Class B taper roller bearings were specified for the Model 1336M. These were found to be unsuitable due to their rapid heating and expanding when in use. It was suggested that No 7514 Class A bearings, made by the First State Bearing Plant, be used for the Model 1A336.

Dimensions of the taper roller bearings No 7514 Class A: 70 x 125 x 33.5 mm; No 7214 bearings: 70 x 125 x 26.5 mm.

The motor for the 1336M is the Model AD 34/2 electric.

Results of tests showed that by increasing the spindle revolutions to 2,100 rpm and using the 7514 Class A bearings, reliable operation may be obtained. The use of No 7214 bearings has no particular advantage in this machine.

VICE MINISTER ASKS MORE TOOLS -- Stanki i instrument, No 9, Sep 49

At a plenary session of the Scientific and Technical Council of the Ministry of Machine-Tool Building, USSR, under the chairmanship of Vice Minister D. A. Ryzhkov, the members were told that the quality and number of types of new Soviet-designed machine tools were satisfactory, but that the quantity of such tools was far from adequate. Automatic-transfer machine lines are paying for themselves in 2 - 2½ years, the meeting was told.

SECRET

CLASSIFICATION ~~SECRET~~

STATE	X	NAVY	X	NSRB		DISTRIBUTION							
ARMY	X	AIR	X	FBI									

RECOMMEND OPTICAL INSTRUMENTS FOR LABS, PLANTS -- Stanki i instrument, No 9, Sep 49

A scientific and technical conference was held by the LONITOMASh (Leningrad Division of the Machine-Building Scientific, Engineering and Technical Society). Over 600 delegates and guests from 52 cities of the Soviet Union participated. These included representatives of plants, ministries, scientific research institutes and higher educational institutions. The quality of surface finishes and problems concerning the introduction of GOST 2789-45 into industry were discussed.

Among the recommendations made at the conference was the following: That plants and specialized laboratories concerned with the quality of surface finishes acquire the following instruments for research: MIS-11 binocular microscope, MII-1 microinterferometer for determining the maximum height of surface irregularities, MS-48 comparator for determining surface finish of a part by comparing with a master, IZP-17 shop profilograph and the IZP-21 profilograph for inspecting holes, KV-6 electrodynamic profile meter, LIAF inductive profile meter for determining mean square value of the height of surface irregularities, GOI microprofile meter for measuring irregular surfaces, GOI instrument for measuring waviness, and PMT-3 instrument for measuring microhardness (Mikrotverdosti).

GET HARD-ALLOY CUTTER TRAINING -- Sovetskaya Belorussiya, No 173, 31 Aug 49

Apprentice machine-tool operators in the Gomel' Machine-Tool Building Plant imeni Kirov are being taught how to grind super-hard alloy cutters and how to insert them in the machine tool. Twenty-three operators at the plant have now converted to high-speed cutting methods.

NEW AUTOMATIC MACHINE TOOLS -- Moskovskiy Bol'shevik, No 199, 24 Aug 49

The Leningrad Automatics Plant has put out a series of automatic machine-tools for mass-production of complex parts. These high-duty machines have electric speed-regulators capable of effecting a smooth shifting from 300 to 4,000 revolutions per minute.

MECHANIZE BEARING-PLANT OPERATIONS -- Mekhanizatsiya Trudoyemkikh Rabot No 7, Jul 49

There has been considerable mechanization in the forge shop of the First State Bearing Plant. Hand-operated scrapers are no longer used in removing scale. Forgings are now subjected to a fine stream of water at 150 - 200 atmospheres' pressure, thereby reducing the time needed for the operation over 50 percent, and assuring an increase of 3 - 5 percent in labor productivity.

A pneumatic lift which moves bars from groove to groove of forging machines has reduced labor to one man per machine for the operation, and shortened the forging time.

A machine for hot rolling of raceways, which compresses the part between an internal and external roller, saves 12 - 20 percent in metal over old methods. The raceways are heated in new "carousel"-type tempering furnaces, with revolving soles. They save time and are simpler to operate.

Mechanization of free forging has reduced labor-consuming work on large semi-finished products 30 - 40 percent.

There has been a 19-percent increase in the hourly work per laborer in the forging shop.

- E N D -